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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,775	10/01/2003	Kirk Charles Frederickson	67,008-076; S-5656	7918
26096	7590	02/13/2006		
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			EXAMINER KIM, CHONG HWA	
			ART UNIT 3682	PAPER NUMBER

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,775

Applicant(s)

FREDERICKSON, KIRK CHARLES

Examiner

Chong H. Kim

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9,13 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,13 and 18-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed Nov 17, 2005, with respect to the rejection by Tripp have been fully considered but are not persuasive. However, the 35 USC 103 rejections fail to provide prima facie case due to the application of non-analogous art. Therefore, the rejections of claims 8 and 18 have been withdrawn.

Election/Restrictions

2. Claims 8 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 23, 2005.

Claim Objections

3. Claims 22-24 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 depends from claim 10 which is canceled by the applicant. For the purpose of providing a complete examination, claim 22 is assumed to be depended from claim 1.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation in line 5, "said second radius one-half said first radius". It is indefinite because such phrase is confusing and unclear.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7, 19-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanski, U.S. Patent 2,309,172.

Kanski shows, in Figs. 1 and 2, a force generator comprising;

a first circular member 64 defined about a first axis (about shaft 52) to define a first inner diameter, the first circular member having a first radius;

a second circular member 55 defined about a second axis (about element 54) to define a second radius, the second radius being one-half the first radius, the second circular member

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movable to simultaneously complete one revolution about the second axis and one orbit around the first axis;

a mass 56 located at a circumference of the second circular member to generate a vibratory inertial force;

wherein the vibratory inertial force is a sinusoidal inertial force in a straight line d1;

wherein the path of the mass is two-cusp hypocycloid;

wherein the first circular member comprises a ring gear;

wherein the second circular member comprises a planet gear;

further comprising a crank 53 which mounts the second circular member, the crank rotates about the first axis; and

further comprising a motor which drives the crank (as describes on page 4, second column, lines 65-68).

8. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Kanski, U.S. Patent 2,309,172.

Kanski shows, in Figs. 1 and 2, a method of force generation for active vibration control comprising the steps of;

defining a circular path 64 about a first axis;

defining a second circular member 55 about a second axis;

locating a mass 56 at a circumference of the second circular member; and

controlling movement of the second circular member about the circular path such that the second circular member simultaneously completes one revolution about the second axis and one orbit around the first axis to generate a vibratory inertial force.

9. Claim 1-7, 13, 19-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tripp, U.S. Patent 2,688,896.

Tripp shows, in Figs. 4 and 6, an apparatus of a force generator and a method of force generator comprising;

a first circular member 404 defined about a first axis to define a first inner diameter, the first circular member having a first radius;

a second circular member 425 defined about a second axis to define a second radius, the second radius being one-half the first radius (see col. 18, lines 20-25), the second circular member movable to simultaneously complete one revolution about the second axis and one orbit around the first axis;

a mass 413 located at a circumference of the second circular member to generate a vibratory inertial force;

wherein the vibratory inertial force is a sinusoidal inertial force in a straight line 330;

wherein the path of the mass is two-cusp hypocycloid;

wherein the first circular member comprises a ring gear;

wherein the second circular member comprises a planet gear;

further comprising a crank 424 which mounts the second circular member, the crank rotates about the first axis; and

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further comprising a motor 230 which drives the crank.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent, U.S. Patent 5,853,144 in view of Kanski.

Vincent discloses, in the Abstract, a method of force generation of active vibration control in a helicopter fuselage comprising the steps of transmitting the vibratory inertial force to the fuselage to minimize a sensed vibratory response to forces from a main rotor assembly, but fails to provide steps of defining two different circular paths wherein one path is one-half the size the other so that a member having a mass at a circumference thereof makes one revolution around one path while making one orbit around the other path.

Kanski teaches, in Figs. 1 and 2, a method of force generation for active vibration control comprising the steps of defining a circular path 64 about a first axis; defining a second circular member 55 about a second axis; locating a mass 56 at a circumference of the second circular member; and controlling movement of the second circular member about the circular path such that the second circular member simultaneously completes one revolution about the second axis and one orbit around the first axis to generate a vibratory inertial force.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the force generator of Vincent with the vibratory generator as taught by Kanski in order to provide a variable and adjustable vibrating machine so that "optimum performance" can be obtained in a machine operation, as described on page 2, first col. Lines 48-63 by Kanski.

12. Claims 1 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent, U.S. Patent 5,853,144 in view of Kanski.

Vincent discloses, in the Abstract, a force generator comprising a controller which drives a motor to control the vibratory inertial force in response to sensed vibratory forces from a main rotor assembly, but fails to show a force generator having two different circular members wherein one member is one-half the size of the other so that the first member having a mass at a circumference thereof makes one revolution about its axis while making one orbit about the other member's axis.

Kanski shows, in Figs. 1 and 2, a force generator comprising; a first circular member 64 defined about a first axis (about shaft 52) to define a first inner diameter, the first circular member having a first radius; a second circular member 55 defined about a second axis (about element 54) to define a second radius, the second radius being one-half the first radius, the second circular member movable to simultaneously complete one revolution about the second axis and one orbit around the first axis; a mass 56 located at a circumference of the second circular member to generate a vibratory inertial force; wherein the vibratory inertial force is a sinusoidal inertial force in a straight line d1; wherein the path of the mass is two-cusp

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hypocycloid; wherein the first circular member comprises a ring gear; wherein the second circular member comprises a planet gear; further comprising a crank 53 which mounts the second circular member, the crank rotates about the first axis; and further comprising a motor which drives the crank (as describes on page 4, second column, lines 65-68).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the force generator of Vincent with the vibratory generator as taught by Kanski in order to provide a variable and adjustable vibrating machine so that “optimum performance” can be obtained in a machine operation, as described on page 2, first col. Lines 48-63 by Kanski.

Response to Arguments

13. Applicant's arguments filed Nov 17, 2006 have been fully considered but they are not persuasive. The applicant argues that Tripp is non-analogous art. The Examiner disagrees. It is reminded that the recitation “force generator” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore, the pin 413 of Tripp is a three dimensional element which has some level of mass. Therefore, the pin 413 can be construed to be a “mass”. When this mass moves up and down the guide 330, a vibratory inertial force can be generated, no matter what the level of the

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generated force is. Therefore, at least claim 1 is anticipated by Tripp's device as shown in Figs. 4 and 6.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vibratory generator.

Opderbeck, U.S. Patent 3,913,409

Ryan, U.S. Patent 4,241,615

McMahon, U.S. Patent 5,67,163

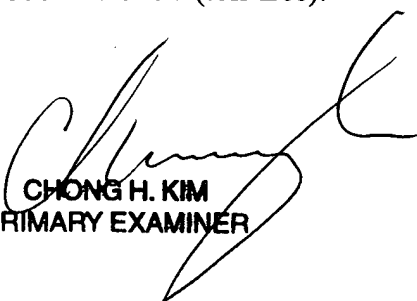
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 6:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chk
February 6, 2006


CHONG H. KIM
PRIMARY EXAMINER